Claim Amendments

39 (currently amended): A genetic construct comprising (a) a first nucleotide sequence encoding an enzyme that interacts with starch or starch granules and (b) a second nucleotide sequence encoding a bacterial starch binding domain, wherein the construct is suitable for transforming a plant, and wherein the plant transformed with the construct expresses a fusion protein comprising the enzyme and the bacterial starch binding domain.

40 (previously presented): The genetic construct of claim 39, wherein the enzyme is selected from the group consisting of a potato granule bound starch synthase I (GBSS1), an E. coli glycogen branching enzyme, and a potato kinase R1.

41 (currently amended): The genetic construct of claim 39, wherein the bacterial starch binding domain is a starch binding domain of a cyclodextrin glycosyltransferase (CGTase) from Bacillus circulans.

42 (previously presented): The genetic construct of claim 39, further comprising a region encoding a signal sequence, wherein the signal sequence causes the fusion protein to be directed to a starch containing cell.

43 (previously presented): The genetic construct of claim 42, wherein the signal sequence is the potato GBSS1 signal sequence.

44 (previously presented): The genetic construct of claim 39, further comprising a region encoding a linker sequence, wherein the linker sequence is present in the fusion protein between the enzyme and the starch binding domain.

45 (previously presented): A plant transformed with the genetic construct of claim 39, or a descendent of the plant that expresses the fusion protein.

46 (previously presented): The plant of claim 45, wherein the fusion protein is expressed in a seed, leaf, root, tuber, stem, fruit, and/or flower of the plant.

47 (previously presented): The plant of claim 45, wherein the fusion protein is expressed in a tuber of the plant.

48 (previously presented): The plant of claim 45, wherein the fusion protein is expressed in a flower of the plant.

49 (previously presented): The plant of claim 45, wherein the plant is selected from the group consisting of potato, sweet potato, cassava, pea, taro, sago, yam, banana, rice, maize, wheat and barley.

50 (previously presented): A seed, tuber, seedling, or other cultivating material from the plant of claim 45.

51 (currently amended): A fusion protein comprising an enzyme that interacts with starch or starch granules and a bacterial starch binding domain.

52 (previously presented): The fusion protein of claim 51, wherein the enzyme is selected from the group consisting of a potato granule bound starch synthase I (GBSS1), an E. coli glycogen branching enzyme, and a potato kinase R1.

53 (currently amended): The fusion protein of claim 51, wherein the bacterial starch binding domain is a starch binding domain of a cyclodextrin glycosyltransferase (CGTase) from Bacillus circulans.

54 (previously presented): A plant expressing the fusion protein of claim 51.

55 (previously presented): A seed, tuber, seedling, or other cultivating material from the plant of claim 64.

56 (previously presented): A method for expressing a fusion protein in a plant, the method comprising transforming the plant with the genetic construct of claim 39.

57 (previously presented): The method of claim 56, wherein the plant is selected from the group consisting of potato, sweet potato, cassava, pea, taro, sago, yam, banana, rice, maize, wheat and barley.

58 (currently amended): A method for increasing the affinity for starch and/or starch granules of an enzyme that can interact with starch or starch granules, the method comprising expressing a fusion protein in a plant, the fusion protein comprising the enzyme and at least one bacterial starch binding domain.